Permanent layoff rates

René Morissette

In 1996, the *New York Times* published a series of articles, "Downsizing of America," arguing that more intense competition and computer-based technological changes were inducing many companies to reduce costs and lay off workers, even ones with considerable seniority. Not surprisingly then, a recent study using the 1977 to 1996 U.S. General Social Survey showed that during the 1990s, U.S. workers were more pessimistic than their counterparts in the 1980s about losing their jobs (Schmidt 1999).

Since the mid-1990s, media reports of mass layoffs in large, often profitable companies have been common. Presumably, globalization has opened new market opportunities for some firms while confronting others with greater competition from abroad. In this context, many Canadians may ask whether they now face a greater chance than two decades ago of losing their job.

Layoffs cause general uncertainty. For example, families with unstable earnings may need to change their consumption and savings patterns. Workers who cannot transfer their defined-benefit pension plans to other plans may find their retirement income affected. And displaced workers often require retraining.

Job security can be viewed as a function of two components: the risk of layoff and the costs associated with layoff, measured by the earnings loss of displaced workers (OECD 1997). This article focuses on the first component, using the Longitudinal Worker file (LWF) to determine if permanent layoff rates rose between the 1980s and the 1990s (see *Data source and concepts*). But what were the chances of finding a new job in the event of a layoff? This issue is looked at by examining hiring rates and permanent quit rates during the same period.

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Data source and concepts

The Longitudinal Worker File (LWF) is a 10% random sample of all workers constructed from four sources: the Record of Employment (ROE) from Human Resources Development Canada (worker separations), the T1 (individual tax returns) and T4 (reported wages and salaries) from the Canada Customs and Revenue Agency, and the Longitudinal Employment Analysis Program (longitudinal company data) from Statistics Canada.

The Employment Insurance Act requires every employer to issue an ROE when an employee working in insurable employment has an interruption in earnings. The ROE determines qualification for Employment Insurance (EI) benefits, the benefit rate, and the duration of a claim. An ROE must be issued even if the employee does not intend to file a claim for EI benefits.[1] Because the ROE indicates the reason for the work interruption or separation, it can be used to count separations from firms by reason.

All employers must register with the Canada Customs and Revenue Agency and issue an annual T4 slip to each employee. The T4 files cover virtually all Canadian workers. Thus, workers at risk of separation are known from the T4 files, and those who actually separate are known from the ROE files.

Job separations are classified into three categories: quits, layoffs and other separations. Layoffs are separations caused by shortage of work. Permanent layoffs are those where the separated worker does not return to the same employer in the same or following year.[2] Other separations are those resulting from a strike or lockout, a return to school, illness or injury, pregnancy or adoption, retirement, work sharing, apprentice training, dismissal, or other reasons. Permanent separation rates are permanent separations divided by total person-jobs in the year.

The hiring rate is hires divided by person-jobs. Hires are the permanent separations in a given year plus the net change in employment between that year and the next. That is, hires are determined indirectly by adding replacement demand (permanent separations) and expansion demand (the net increase in employment).

The large sample size of the LWF allows a very detailed level of analysis of job separations (for example, detailed age group, firm size, province, or industry).

Job stability and job loss

Job stability fell between 1977 and 1993, particularly for jobs with initial tenure of less than one year. However, between 1993 and 2001 the trend reversed. As a result, no long-term trend towards declining job stability was evident for any age, sex or education group over the whole period (Heisz 2002).

Over the 1978-1994 period, years that were comparable in the business cycle showed no general upward trend in permanent layoff rates. However, the probability of permanent layoffs increased among older and highly paid workers (Picot and Lin 1997).

An analysis of the incidence of job loss in the United States between 1981 and 2001 concluded that "while there was no secular increase in overall rates of job loss, there was a secular increase in the rate of job loss for the older and more educated, due largely to an increase in job loss to position/shift abolished," rather than from a rise in plant closings, slack work or other reasons—a pattern consistent with the notion of 'downsizing' (Farber 2003, 13).

Job stability and job loss are two distinct concepts. Job stability implicitly incorporates both layoff rates (rates of job loss) and quit rates. Measured by average job duration or retention rates, job stability could remain unchanged if an increase in layoff rates were accompanied by a decrease in quit rates;[3] for example, an increase in job-loss rates in conjunction with a decrease in hiring rates or heightened insecurity among workers might induce many to remain in their job. Thus, the absence of a long-term trend toward declining job stability is not necessarily inconsistent with an increase in permanent layoff rates.

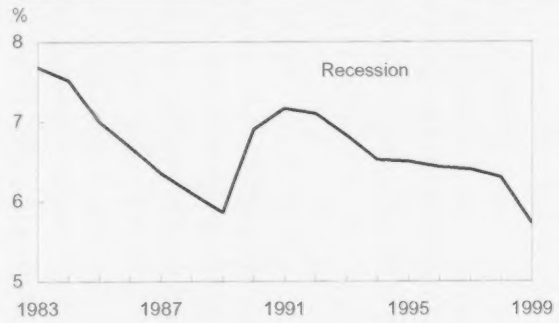
Permanent layoffs, 1983-1999

The concept of permanent layoff applies only to employees. Permanent layoffs rise in recessions and fall during expansion periods. Structural changes in permanent layoff rates can be determined by comparing years that are roughly at the same point in the business cycle. Between 1983 and 1999, the economy went through two full business cycles, which were reflected in the unemployment rate of men aged 25 to 54. The rates in 1989 and 1999 were very similar (6.3% and 6.5% respectively). Furthermore, the overall unemployment rate in 1999 was 7.6%, very close to the 7.5% in 1989. The question then is whether permanent layoff rates were higher in 1999 than in 1989.

To ensure a consistent time series of permanent layoff rates, both the jobs for which employers issue a T4 slip and the jobs for which they are required to issue an ROE must be fairly consistent. However, both changed slightly during the 1983-1999 period. But, selecting jobs with an annual wage of at least $500 in 1989 dollars ($621 in 1999 dollars) allows permanent layoffs to be measured on a consistent basis.[4] Following the 1981-82 recession, permanent layoff rates fell, reaching a low of 5.9% in 1989 (Chart A). They rose again with the 1990-92 recession but ended the 1990s at 5.7%.

Even with higher cutoffs (from $1,000 to $5,000 in 1989 dollars), permanent layoff rates displayed no upward trend—although the values of the permanent layoff rates fall as higher cutoffs are used.

Chart A: Permanent layoff rates* fall during expansions and rise in recessions.



Source: Longitudinal Worker File
** Jobs paying at least $500 in 1989 dollars.*

Like permanent layoff rates, temporary layoff rates were very similar in 1989 and 1999 (Table 1). However, hiring rates were generally lower during the second half of the 1990s than during the second half of the 1980s. And, permanent quit rates were only 7.3% in 1999, almost 2 percentage points lower than in 1989.

Permanent layoff rates were higher in 1999 than in 1989 by half a percentage point or more for men 55 to 64 and women 35 to 44 (Table 2). No other age-sex group showed a sizeable increase.

Compared with 1989, permanent layoff rates in 1999 were generally higher by half a percentage point or more in business services and distributive services.

Table 1: Separation and hiring rates*

	Permanent separations				Hiring rates	Temporary layoff rates
	Total	Layoffs	Quits	Other		
			%			
1983	19.5	7.7	5.4	6.5	...	9.6
1985	21.3	7.0	7.0	7.3	24.6	8.5
1987	22.4	6.4	8.7	7.3	25.3	7.8
1989	22.3	5.9	9.2	7.2	25.0	7.3
1991	20.2	7.2	5.8	7.1	17.7	9.5
1993	18.4	6.8	4.8	6.8	18.0	9.3
1995	18.6	6.5	5.4	6.8	19.1	9.0
1997	18.6	6.4	6.2	6.0	23.3	8.5
1999	19.1	5.7	7.3	6.0	21.8	7.8

Source: Longitudinal Worker File
** Jobs paying at least $500 in 1989 dollars.*

However, rates did not increase in either manufacturing or primary industries/construction. These patterns were observed for both men and women.

In large private-sector firms (500 or more employees), permanent layoff rates rose between 1989 and 1999—from 3.3% to 4.0% for men and from 1.9% to 2.5% for women. In contrast, in firms with fewer than 20 employees—whose rates were at least three times higher than those in large firms (except in 1999)—rates showed no increase during the period.

While permanent layoff rates of highly paid men ($50,000 or more in the year prior to the layoff) did not rise, the raw data show some evidence of rising layoff rates among highly paid women.

The only sizeable increases in job loss took place in Newfoundland and Labrador, and Prince Edward Island; these provinces saw their permanent layoff rates rise by about 2 percentage points between 1989 and 1999.[5] Nova Scotia experienced a slight increase, while the remaining provinces were unchanged or had slight declines. Hence, for most workers and most provinces, permanent layoff rates were no higher at the end of the 1990s than at the end of the 1980s.

Multivariate analysis

To assess whether the patterns hold for workers of similar ages holding comparable jobs, logit models were run to estimate the probability of being laid off in a given year (Table 3). Separate regressions were run for 10 age-sex groups. The dependent variable equals 1 when a job ends with a permanent layoff, 0 otherwise.

For each group, two models were defined. The first used the regressors age, age squared, province, and a vector of year effects covering the 1983-1999 period (1989 being omitted). The second model added controls for industry (six categories) and firm size (four categories).[6]

Model 1 showed that between 1989 and 1999, the probability of being permanently laid off increased significantly (at the 5% level) for men aged 35 to 44 and 55 to 64. However, the increases were modest—0.3 and 0.6 percentage points respectively.[7] Women 25 to 34 and 35 to 44 also experienced increases—0.3 and 0.5 points respectively. Although moderate in absolute terms, the increase for women 35 to 44 is not negligible in relative terms, amounting to 16% (since their permanent layoff rate was just 3.2% in 1989). In contrast, men 15 to 24 saw their risk of job loss fall by 1 percentage point. Hence, only men 55 to 64 and women 35 to 44 experienced increases of half a percentage point or more between 1989 and 1999.

Since layoff rates vary across industries and are higher in small firms than in larger ones, changes in the distribution of employment by industry and firm size may affect the risk of job loss experienced by Canadian workers. The extent to which this occurred is assessed in model 2.

Changes in the distribution of employment by industry and firm size accounted for only a small portion of the increased risk of job loss experienced by men aged 55 to 64 and women 35 to 44. Most of the increase in job loss observed for these two groups remained when controls for industry and firm size were added in model 2. A similar conclusion holds for women 25 to 34.

In contrast, compositional effects accounted for all the increased risk of job loss faced by men 35 to 44. Their probability of being permanently laid off no longer increased after controlling for industry and firm size.

The risk of job loss rose by about 0.5 percentage points for workers—both men and women—aged 45 to 54, after controlling for industry and firm size. The lack of increase in the likelihood of job loss in model 1 suggests that changes in the distribution of employment by industry and firm size, which occurred between 1989 and 1999, tended to *decrease* layoff rates of these workers.

Table 2: Permanent layoff rates* by various characteristics

	1983	1985	1987	1989	1991	1993	1995	1997	1999
					%				
Total	**7.7**	**7.0**	**6.4**	**5.9**	**7.2**	**6.8**	**6.5**	**6.4**	**5.7**
Men	9.7	8.8	8.1	7.7	9.4	8.8	8.5	8.1	7.5
15 to 24	11.8	10.4	9.2	8.3	10.2	9.5	9.2	8.4	7.6
25 to 34	10.5	9.4	8.7	8.1	10.5	9.8	9.1	8.7	7.8
35 to 44	8.3	7.6	7.3	7.1	8.7	8.3	8.0	7.9	7.3
45 to 54	7.7	7.4	6.8	6.7	7.9	7.6	7.4	7.4	7.0
55 to 64	7.1	7.2	6.9	7.4	8.5	8.1	8.4	8.3	8.1
Women	5.0	4.6	4.2	3.8	4.6	4.5	4.2	4.5	3.9
15 to 24	6.3	5.8	4.9	4.3	5.2	5.2	5.1	5.1	4.3
25 to 34	5.0	4.6	4.4	4.0	5.0	4.9	4.5	5.0	4.2
35 to 44	3.9	3.9	3.5	3.2	4.2	4.0	3.8	4.3	3.7
45 to 54	3.9	3.6	3.3	3.1	3.9	3.7	3.3	3.7	3.3
55 to 64	3.9	3.6	3.5	3.5	4.3	4.5	3.8	4.3	3.6
Province									
Newfoundland and Labrador	16.1	17.2	16.9	15.8	17.0	17.2	14.0	14.8	18.0
Prince Edward Island	12.2	12.4	11.8	12.2	12.7	12.0	12.3	14.9	14.3
Nova Scotia	8.7	9.1	8.4	8.2	8.7	8.7	8.9	8.4	8.7
New Brunswick	12.0	11.8	11.7	11.4	11.9	12.4	11.8	11.8	11.2
Quebec	8.5	8.3	7.6	7.3	8.3	7.7	7.5	8.0	6.5
Ontario	5.6	4.8	4.1	3.9	5.5	4.9	4.6	4.7	3.9
Manitoba	5.4	5.1	5.0	4.4	5.2	5.3	4.7	4.5	4.4
Saskatchewan	6.6	6.1	6.6	5.7	6.5	6.3	5.8	5.5	5.5
Alberta	9.9	7.5	7.2	6.1	7.1	7.3	6.9	5.6	5.9
British Columbia	9.4	9.1	8.2	7.2	8.3	7.8	7.7	7.4	6.7
Industry									
Primary and construction	23.6	22.1	21.1	20.5	23.8	23.1	22.5	20.7	20.0
Manufacturing	7.4	6.7	5.7	5.9	8.0	6.9	6.6	6.1	5.4
Distributive services	5.5	5.3	5.2	4.2	6.0	5.8	5.2	5.3	4.8
Business services	6.1	5.5	4.6	4.2	5.9	5.6	5.5	5.4	5.1
Consumer services	7.5	6.4	5.4	4.4	5.9	5.8	5.5	5.2	4.7
Public services	2.5	2.6	2.4	2.0	2.3	2.6	2.2	3.3	2.3
Firm size									
1 to 19 employees	13.7	12.6	11.4	10.2	12.0	12.0	11.3	10.6	9.6
20 to 99	9.9	9.0	7.9	7.6	9.5	8.6	8.6	8.0	7.3
100 to 499	7.3	6.2	5.8	6.0	7.5	6.0	6.0	6.2	5.3
500 or more	3.4	3.0	2.7	2.4	3.0	2.9	2.6	3.1	2.7
Firm size – private sector									
Men 15 to 64									
1 to 19 employees	17.7	16.3	14.9	13.4	16.3	16.1	15.0	14.1	12.8
20 to 99	13.1	11.9	10.5	10.2	12.8	11.4	11.6	10.2	9.5
100 to 499	10.9	9.2	8.4	9.1	11.5	8.8	8.7	8.5	7.6
500 or more	5.0	4.0	3.6	3.3	4.6	4.1	3.9	3.9	4.0
Women 15 to 64									
1 to 19 employees	9.9	9.4	8.4	7.5	8.9	8.7	8.3	7.9	7.3
20 to 99	6.9	5.8	5.0	4.9	6.5	6.1	5.6	5.6	5.1
100 to 499	5.4	4.3	3.9	3.9	5.3	4.7	4.4	4.3	3.8
500 or more	2.9	2.6	2.3	1.9	2.7	2.5	2.3	2.5	2.5
Earnings**									
Less than $20,000	10.5	10.0	8.9	7.9	9.4	9.9	9.3	8.8	7.6
$20,000 to $50,000	5.3	4.3	4.1	4.3	5.6	4.5	4.4	4.7	4.4
$50,000 or more	4.1	1.9	1.9	2.4	3.5	2.1	1.7	2.2	2.2

Source: Longitudinal Worker File
* *Jobs paying at least $500 in 1989 dollars.*
** *Total earnings (in 1999 dollars) in the year prior to layoff.*

Table 3: Logit models of permanent layoffs by age and sex

	Permanent layoff rate in 1989	Change in risk of layoff 1989-1999**	
		Model 1	Model 2
	%	% point	
Men			
15 to 24	8.3	-1.0	-0.5
25 to 34	8.1	-0.3	0.0*
35 to 44	7.1	0.3	0.0*
45 to 54	6.7	0.2*	0.4
55 to 64	7.4	0.6	0.4
Women			
15 to 24	4.3	-0.1	0.0*
25 to 34	4.0	0.3	0.3
35 to 44	3.2	0.5	0.5
45 to 54	3.1	0.1*	0.5
55 to 64	3.5	0.0*	0.2*

Source: Longitudinal Worker File

* *Coefficient for the year 1999 not statistically significant at the 5% level (two-tailed test).*

** *How much did the probability of being permanently laid off change between 1989 and 1999?*

Note: For each group, marginal effects for the year 1999 are evaluated at a probability equal to the average permanent layoff rate of 1989. Model 1 controls for age, age squared, province and a vector of year effects. Model 2 adds industry (6 categories) and firm size (4 categories).

Taken together, the descriptive evidence and the statistical models provide little evidence that chances of job loss increased substantially between the 1980s and the 1990s.

Only men aged 55 to 64 and women 35 to 44 saw their risk of job loss increase by half a percentage point or more between 1989 and 1999. However, some segments of the economy may have experienced greater risk than others.

Three questions arise. First, were men and women of a given age and employed in a given industry more likely to be permanently laid off in 1999 than in 1989? Some industries did indeed experience growing risks of job loss (Table 4). While the risk generally decreased in goods-producing industries and changed very little in consumer services, it rose by at least half a percentage point in distributive services, business services and public services.[8]

Second, did firm size affect these rates? Large firms in the private sector laid off workers at a greater rate in 1999 than in 1989. The risk of permanent layoff in these firms rose by 0.7 percentage points for men and 0.6 points for women. This is not negligible since it represents an increase of at least 20% in relative terms (the permanent layoff rate in large firms in 1989 was 3.3% for men and 1.9% for women).[9] In 1999, large firms accounted for one-third of private-sector employment.[10]

Third, did highly paid workers see their chances of being laid off rise? Highly paid women in the private sector experienced an increase of at least half a percentage point in their risk of layoff. Since their permanent layoff rate in 1989 was only 1%, their chances of being laid off remained fairly low by the end of the 1990s. No evidence of increased chances was found for highly paid men.

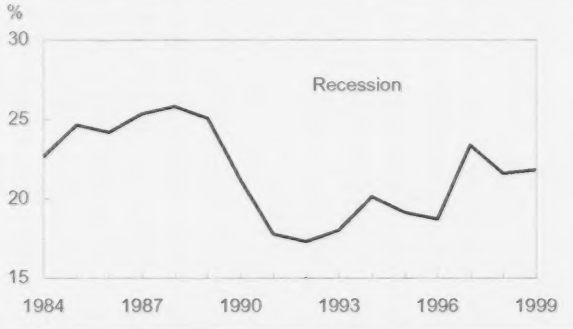
Hence, while permanent layoff rates did not rise substantially between the 1980s and the 1990s, workers in some sectors did experience growing chances of losing their jobs.

Hiring rates, permanent quit rates and job stability

In the first half of the 1990s, hiring rates were relatively low compared with after the 1981-82 recession (Chart B). Between 1995 and 1999, rates averaged 21%, much lower than the 25% during the 1985-1989 period.

In most provinces, hiring rates were substantially lower in the second half of the 1990s than in the second half of the 1980s. For instance, in Ontario they were about 21% in 1997, fully 4 percentage points below 1987. Rates in British Columbia were 20% in 1999, almost 10 points lower than in 1989. This suggests that while

Chart B: Hiring rates* were lower in the 1990s than in the 1980s.



Source: Longitudinal Worker File

* *Jobs paying at least $500 in 1989 dollars.*

Table 4: Logit models of permanent layoffs by industry, firm size and earnings

	Men		Women	
	Permanent layoff rate in 1989	Change in risk of layoff 1989-1999**	Permanent layoff rate in 1989	Change in risk of layoff 1989-1999**
	%	% point	%	% point
Industry				
Primary and construction	22.2	-0.4	12.7	-1.0*
Manufacturing	6.1	-0.3	5.7	-0.3
Distributive services	4.4	0.9	3.8	0.5
Business services	5.6	0.7	3.2	1.1
Consumer services	5.0	0.3	4.0	0.1
Public services	2.3	0.8	1.8	0.7
Firm size – private sector				
1 to 19 employees	13.4	-1.2	7.5	-0.4
20 to 99 employees	10.2	-1.1	4.9	0.1*
100 to 499 employees	9.1	-1.7	3.9	-0.1*
500 or more employees	3.3	0.7	1.9	0.6
Highly paid workers†				
All industries	2.7	0.1*	0.4	0.3
Private sector	3.6	0.1*	0.9	0.7

Source: Longitudinal Worker File
* *Coefficient for the year 1999 not statistically significant at the 5% level (two-tailed test).*
** *How much did the probability of being permanently laid off change between 1989 and 1999?*
† *Workers with total earnings of $50,000 or more (in 1999 dollars) in the preceding year.*
Note: Industry-specific logit models and firm size-specific logit models use the explanatory variables age, age squared, province, and year effects. Logit models for highly paid workers use age, age squared, industry, firm size, province, and a vector of year effects. All models are run separately for men and women. The private sector refers to all industries except public services.

the 1990s than in the 1980s. Indeed, between 1989 and 1999, permanent quit rates in Canada fell from 9.2% to 7.3% (Table 6). Decreases were observed for all age groups, all major industry groups, all size classes, and all provinces except Prince Edward Island and New Brunswick. In absolute terms, permanent quit rates fell most in Ontario and British Columbia, 3.1 and 2.5 percentage points respectively. In relative terms, they fell by at least 25% in these two provinces as well as in Newfoundland and Labrador.

The drop in quit rates was not simply caused by the aging of the workforce. For all age groups, logit models of permanent quits still showed a substantial decrease in the probability of quitting even after controlling for age, age squared, and province of work. Between 1989 and 1999, the probability of quitting fell between 0.7 and 2.2 percentage points for women and between 0.4 and 1.9 points for men (Table 7). For most

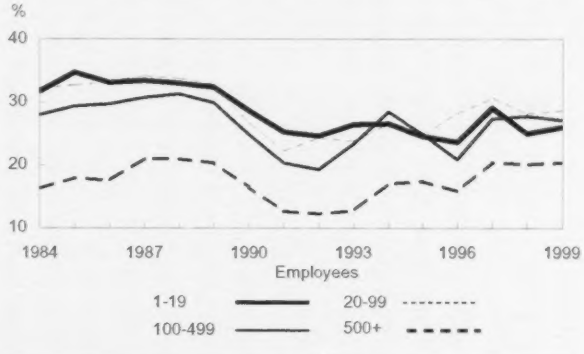
chances of being permanently laid off did not rise substantially between the 1980s and the 1990s, chances of finding a new job in the event of a layoff were considerably lower (Table 5).

In the private sector, hiring rates fell much more in small firms than in large firms. In firms with less than 20 employees, average hiring rates fell 23% between the 1985-1989 period and the 1995-1999 period (Chart C). In contrast, they fell only 4% in large firms.

The drop in hiring rates was not uniform across age groups. Workers aged 25 to 34 (both men and women) saw their average hiring rates fall by at least 15% between the 1985-1989 and 1995-1999 periods (Chart D). In contrast, men aged 45 to 54 experienced a 10% increase.

If labour market opportunities, measured by hiring rates, were lower in the 1990s, one might expect that employees quit their jobs less frequently in

Chart C: In the private sector, hiring rates* fell more in smaller firms.



Source: Longitudinal Worker File
* *Jobs paying at least $500 in 1989 dollars.*

Table 5: Hiring rates* by province

	Nfld. Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
						%				
1985	35.8	30.3	25.3	26.6	23.6	23.7	21.4	23.1	29.8	24.6
1987	35.2	30.8	25.2	28.0	24.5	25.3	21.8	20.8	27.0	26.5
1989	32.6	28.2	25.3	28.0	24.7	23.4	20.7	22.0	27.7	29.7
1991	30.0	24.4	18.8	21.8	17.8	14.1	15.3	19.0	21.7	23.2
1993	30.1	22.0	19.6	22.7	17.9	14.5	16.0	17.7	23.0	22.1
1995	25.0	27.7	20.6	23.4	18.9	16.8	17.9	19.4	22.8	21.1
1997	28.8	27.7	24.0	23.8	22.3	21.1	22.0	23.8	31.5	23.8
1999	25.2	25.5	22.6	26.2	23.2	21.0	19.7	19.7	24.6	20.4
1985-1989	34.6	30.0	25.5	27.3	24.2	24.2	21.3	22.1	27.6	27.3
1995-1999	26.0	26.1	21.7	24.0	21.1	18.9	19.8	20.4	25.7	21.2
% change	-24.9	-13.1	-15.0	-12.1	-12.7	-21.8	-7.1	-7.7	-6.7	-22.2

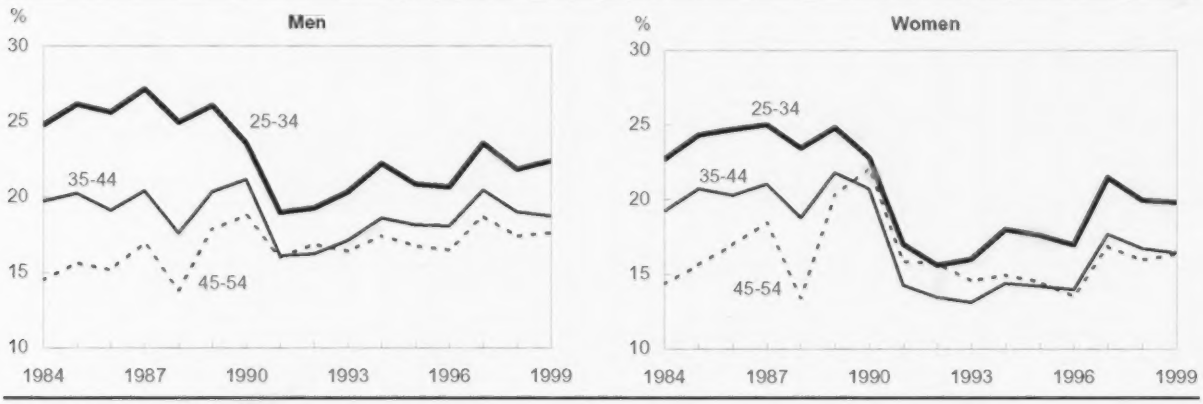
Source: Longitudinal Worker File
** Jobs paying at least $500 in 1989 dollars.*

age groups, adding controls for industry and firm size did not attenuate these decreases. In fact, the probability of quitting fell between 16% and 21%—in relative terms—for workers aged 35 to 54 when these controls were added.[11]

Since people with greater seniority tend to quit less—likely reflecting a good match between job requirements and employee skills—one might argue that the decrease in quit rates was simply due to growing levels of seniority within age groups. This argument does not hold for men. In 1999, their average levels of seniority were, in all age groups, no higher than in 1989 (Table 8). In contrast, women aged 35 and over had more seniority in 1999 than in 1989. Thus, part of the decrease in quit rates of women could be due to increased seniority.

For men aged 45 to 54, the fall in quit rates coupled with increased hiring rates suggests that other factors may have contributed to decreasing quit rates. For instance, legislative changes in Employment Insurance

Chart D: Hiring rates* varied considerably by age and sex.



Source: Longitudinal Worker File
** Jobs paying at least $500 in 1989 dollars.*

Table 6: Permanent quit rates* by various characteristics

	1983	1985	1987	1989	1991	1993	1995	1997	1999
					%				
Total	**5.4**	**7.0**	**8.7**	**9.2**	**5.8**	**4.8**	**5.4**	**6.2**	**7.3**
Men	4.8	6.5	8.3	8.9	5.4	4.6	5.3	6.3	7.2
15 to 24	7.5	10.4	13.3	13.9	9.3	8.1	9.1	10.4	12.3
25 to 34	5.4	7.4	9.4	9.8	6.4	5.7	6.7	8.2	9.3
35 to 44	3.5	4.5	5.6	5.9	3.7	3.3	3.9	4.8	5.5
45 to 54	2.3	2.9	3.7	3.8	2.4	2.0	2.4	2.8	3.3
55 to 64	1.4	1.8	2.4	2.7	1.6	1.3	1.6	2.1	2.2
Women	6.3	7.8	9.3	9.6	6.4	5.1	5.5	6.2	7.4
15 to 24	9.1	11.8	14.2	14.6	10.9	9.3	10.2	10.6	12.8
25 to 34	6.6	8.2	9.9	9.8	7.1	5.8	6.5	7.7	9.0
35 to 44	4.5	5.3	6.5	6.6	4.5	3.5	3.8	4.5	5.5
45 to 54	3.2	4.0	4.8	4.7	3.3	2.5	2.5	3.0	3.5
55 to 64	2.7	3.1	3.6	3.7	2.6	1.9	1.8	2.2	2.4
Province									
Newfoundland and Labrador	2.8	2.9	3.9	4.4	2.7	2.0	2.2	2.6	3.3
Prince Edward Island	3.1	3.3	3.8	4.4	2.9	2.2	2.6	3.4	4.5
Nova Scotia	3.9	4.9	5.8	6.3	4.0	3.3	3.6	3.9	5.7
New Brunswick	3.5	4.0	5.2	5.6	4.0	3.1	3.6	4.1	5.7
Quebec	4.1	5.7	7.5	7.7	4.9	4.0	4.7	5.3	6.8
Ontario	5.6	7.9	10.2	10.4	5.6	4.4	5.2	5.8	7.3
Manitoba	5.7	7.0	8.1	8.1	5.7	4.9	5.9	7.0	7.8
Saskatchewan	6.9	7.6	7.9	8.1	6.3	5.1	6.1	7.7	7.2
Alberta	8.2	10.0	10.4	11.4	8.9	7.5	8.0	10.5	10.2
British Columbia	5.4	5.9	7.5	9.2	7.3	6.3	6.3	6.4	6.7
Industry									
Primary and construction	5.0	6.1	7.7	7.9	4.2	3.5	3.9	5.2	5.4
Manufacturing	4.9	7.0	9.5	10.0	5.1	4.2	5.2	5.9	7.3
Distributive services	4.2	5.9	7.5	8.4	5.0	4.3	5.0	6.4	7.4
Business services	6.8	8.4	9.8	10.1	6.6	5.4	5.8	6.8	7.6
Consumer services	8.7	10.9	13.2	13.9	10.1	8.5	9.3	10.0	11.8
Public services	2.5	3.1	3.5	3.5	2.4	1.8	1.8	2.2	2.4
Firm size									
1 to 19 employees	6.0	7.5	8.8	8.7	5.8	4.8	5.4	5.9	6.7
20 to 99	7.7	10.0	12.2	12.8	8.3	7.0	7.8	8.7	10.1
100 to 499	6.6	9.0	11.1	11.7	7.4	6.0	6.7	7.7	9.1
500 or more	3.7	4.9	6.3	6.9	4.3	3.4	3.9	4.8	5.6
Earnings**									
Less than $20,000	7.3	9.5	11.6	12.0	8.3	6.9	7.6	8.4	9.9
$20,000 to $50,000	3.9	5.0	6.3	7.0	4.0	3.1	3.6	4.5	5.2
$50,000 or more	2.2	2.4	3.0	3.5	2.2	1.7	2.0	2.7	3.0

Source: Longitudinal Worker File

* *Jobs paying at least $500 in 1989 dollars.*

** *Total earnings (in 1999 dollars) in the year prior to layoff.*

in 1993, eliminating the EI eligibility of workers quitting without just cause, reduced the propensity to quit among young workers (those 15 to 24) and women aged 25 to 54 (Kuhn and Sweetman 1998).[12]

Hence, while permanent layoff rates showed no substantial increase between the 1980s and the 1990s, permanent quit rates fell markedly. Since other permanent separations fell moderately, permanent separations taken as a whole (permanent layoffs, permanent quits and other permanent separations) fell in the 1990s. This explains why job stability, measured by average complete job duration, rose in the 1990s.[13]

This increase in job stability is not necessarily a positive development if the decrease in permanent quit rates results partly from a decrease in hiring rates—that is, from lessened labour market opportunities. An

Table 7: Logit models of permanent quits

	Permanent quit rate in 1989	Change in chances of quitting 1989-1999*	
		Model 1	Model 2
	%	% point	
Men			
15 to 24	13.9	-1.9	-2.5
25 to 34	9.8	-0.4	-0.9
35 to 44	5.9	-0.5	-0.9
45 to 54	3.8	-0.5	-0.7
55 to 64	2.7	-0.6	-0.7
Women			
15 to 24	14.6	-2.2	-2.9
25 to 34	9.8	-0.7	-1.0
35 to 44	6.6	-1.1	-1.4
45 to 54	4.7	-1.2	-1.0
55 to 64	3.7	-1.3	-1.2

Source: Longitudinal Worker File

** How much did the probability of permanently quitting change between 1989 and 1999?*

Note: For each group, marginal effects for 1999 are evaluated at a probability equal to the average permanent quit rate of 1989. Model 1 controls for age, age squared, province, and a vector of year effects. Model 2 adds industry (6 categories) and firm size (4 categories). For all age-sex groups, the coefficient for the year 1999 is statistically significant at the 0.01% level (two-tailed test).

Table 8: Average months of seniority

	All employees		Employees who are not full-time students	
	1989	1999	1989	1999
	%			
Men				
15 to 24	17.4	17.5	19.6	18.8
25 to 34	53.0	49.4	53.3	49.8
35 to 44	113.7	102.8	113.8	103.0
45 to 54	169.3	168.4	169.5	168.4
55 to 64	188.2	175.3	188.2	175.3
Women				
15 to 24	16.1	16.0	18.3	17.6
25 to 34	49.2	48.2	49.6	48.7
35 to 44	84.1	93.8	84.2	94.1
45 to 54	107.8	135.6	108.0	135.6
55 to 64	143.1	149.0	143.1	149.0

Source: Labour Force Survey, September

increase in job stability resulting from falling labour market opportunities has quite different implications for workers' well-being than one resulting from a growing supply of permanent well-paid jobs.

Conclusion

Both descriptive evidence and statistical models provide little evidence of a substantial rise in permanent layoff rates between the 1980s and the 1990s. While the risk of job loss increased in a non-negligible way in some industries and in large private-sector firms, men and women of different age groups generally did not experience drastic increases in their likelihood of being permanently laid off. Only men aged 55 to 64 and women 35 to 44 saw their chances of being permanently laid off rise by half a percentage point or more.

These averages reflect aggregate patterns for the economy and do not necessarily apply to all sectors of the labour market. For instance, two provinces, Newfoundland and Labrador and Prince Edward Island, experienced substantial increases in layoff rates between 1989 and 1999. Furthermore, there is little evidence that permanent layoff rates decreased despite increases in educational attainment between the 1980s and the 1990s. The lower chances of being permanently laid off among highly educated workers (Galarneau and Stratychuk 2001) suggests that permanent layoff rates of some groups—for example, workers with no high school diploma—may well have risen during this period.

Most striking is the widespread drop in permanent quit rates observed during the period. It seems reasonable to argue that part of the decrease in quit rates was due to the decrease in hiring rates in the 1990s. While chances of losing one's job did not rise substantially over the 1980s and 1990s, chances of finding a new job in the event of a layoff fell markedly.

Perspectives

Notes

1 Non-compliance penalties may apply to employers who fail to issue an ROE.

2 The Longitudinal Employment Analysis Program file is used to distinguish permanent separations from temporary separations. The T1 files provide age and sex.

3 Retention rate refers to the conditional probability that a job of any given length will last another year.

4 See Morissette (2004) for details.

5 In both provinces, the increase in permanent layoff rates is statistically significant at the 1% level (two-tailed test).

6 Interaction terms between covariates and year effects were excluded in order to capture any increase in the probability of being laid off by intercept shifts, thereby measuring an 'average' increase in probability across years. The number of observations used in these logit models varied between 711,562 for women aged 55 to 64 and 4,323,671 for men aged 25 to 34.

7 The increase of 0.2 percentage points observed among men aged 45 to 54 is statistically significant at the 6% level (two-tailed test).

8 The careful reader may wonder why the risk of permanent layoff in public services rose by 0.7 to 0.8 percentage points for workers of a given age while permanent layoff rates rose by only 0.3 percentage points between 1989 and 1999 (Table 2). One explanation is that the average age of employees rose substantially in public services, increasing from 36.1 to 39.6, compared with 32.2 to 35.0 in the private sector (Longitudinal Worker File: 1% version). Older workers generally have relatively low layoff rates, so permanent layoff rates in public services tended to decrease. The effect was more than offset by a growing risk of layoff for workers of a given age, thereby generating the modest increase in permanent layoff rates shown in Table 2.

9 In contrast, men employed in firms with less than 500 employees and women employed in small firms saw their risk of permanent layoff fall between 1989 and 1999.

10 As calculated from the 1% version of the LWF.

11 It fell even more for those aged 55 to 64—men -24% and women -33%.

12 Kuhn and Sweetman (1998, 570) conclude that "the magnitude of the reductions is quite large for women: relative to the baseline period, the quit rate drops by 12% to 18% in the short run and roughly 30% in the long run. In striking contrast, prime age males' separation behaviour seems unaffected by the legislation."

13 Following Picot, Heisz and Nakamura (2001, 8), average complete job duration is computed as follows. Assuming an exponential survivor function, job duration can be estimated by $1/l$, where $l = -\ln(R)/t$, where R is the average retention rate for workers and t, the time interval used here, is equal to 1 year. The average retention rate R is simply 1 minus the probability of permanent separation.

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